Amendments to the Claims

1. (currently amended) A method for analyzing a sample comprising:

a) providing a sample containing at least two molecular species, wherein at least one of the molecular species is capable of stimulating scintillation;

b) providing a scintillating material, wherein the surface of the scintillating material adsorbs at least one of the molecular species via a general molecular property-based binding interaction between the molecular species and the scintillating material, and where the scintillating material ~~can be~~is stimulated to scintillate above background by at least one of the adsorbed molecular species, but is not stimulated to scintillate above background by any molecular species which is not adsorbed;

c) measuring the scintillation emitted by the scintillation material;

wherein the adsorption of the molecular species to the scintillating material is due to a chemical or biochemical transformation of one of said molecular species into another of said molecular species; and

d) determining the progress of or degree of completion of the molecular transformation;

wherein the reaction product of the chemical or biochemical transformation binds to the scintillating material, and at least one of the reactants of said chemical or biochemical transformation does not bind to the scintillating material.

2. (cancelled)

3. (original) The method of claim 1, wherein the general molecular property-based binding interaction is selected from the group consisting of charge-charge interactions, dipole-charge interactions, dipole-dipole interactions and hydrophobic interactions.

4. (cancelled)

5. (original) The method of claim 1, wherein the scintillating material is selected from the group consisting of scintillating plastics and scintillating glasses.

6. (original) The method of claim 1, wherein the scintillating material is a plastic doped with a scintillant.

7. (original) The method of claim 5, wherein the scintillating plastic is selected from the group consisting of polystyrene doped with at least one scintillating fluor and polyvinyltoluene doped with at least one scintillating fluor.

8. (previously amended) The method of claim 1, wherein at least one of the at least two molecular species provided is a substrate for an enzyme-catalyzed reaction or a series of enzyme-catalyzed reactions. another of the at least two molecular species is a product of the enzyme-catalyzed reaction or series of enzyme-catalyzed reactions.

9. (original) The method of claim 8, wherein the general molecular property-based binding affinity is due to the presence of positive charge, the absence of positive charge, the presence of negative charge, the absence of negative charge, the presence of a dipole moment, the absence of a dipole moment, the presence of hydrophobicity, or the absence of hydrophobicity.

10. (previously amended) The method of claim 8, wherein the enzyme catalyzed reaction is selected from the group consisting of kinase catalyzed reactions, lipase catalyzed reactions, and tRNA transferase catalyzed reactions.

11. (original) The method of claim 8, wherein the enzyme catalyzed reaction is selected from the group consisting of the reaction cascade or any portion thereof for the sequential synthesis ofuridinediphosphate-N-acetylmuramic acid pentapeptide catalyzed by the enzymes MurA, MurB, MurC, MurD, MurE, and MurF.

12. (original) The method of claim 8, wherein the enzyme catalyzed reaction is that catalyzed by MurA.

13. (original) The method of claim 8, wherein the enzyme catalyzed reaction is that catalyzed by MurB.

14. (original) The method of claim 8, wherein the enzyme catalyzed reaction is that catalyzed by MurC.

15. (original) The method of claim 8, wherein the enzyme catalyzed reaction is that catalyzed by MurD.

16. (original) The method of claim 8, wherein the enzyme catalyzed reaction is that catalyzed by MurE.

17. (original) The method of claim 8, wherein the enzyme catalyzed reaction is that catalyzed by MurF.

18. (original) The method of claim 8, wherein the enzyme catalyzed reaction is the reaction cascade for the sequential synthesis of uridinediphosphate-N-cetylmuramic acid pentapeptide catalyzed by the enzymes MurA, MurB, MurC, MurD, MurE, and MurF.

19. (original) The method of claim 4, further comprising performing the method on a plurality of samples to effect a high throughput screen.

20. (currently amended) The method of claim 19, wherein the high throughput screen is used to identify compounds which inhibit an enzyme catalyzed reaction selected from the group consisting of the reaction cascade or any portion thereof for the sequential synthesis ofuridinediphosphate-N-acetylmurarnic acid pentapeptide catalyzed by the enzymes MurA, MurB, MurC, MurD, MurE, and MurF; kinase catalyzed reactions, lipase catalyzed reactions, ~~phosphatase catalyzed reactions, protease catalyzed reactions,~~ and tRNA transferase catalyzed reactions.

21.-46. (cancelled).